REMARKS

Applicant is in receipt of the Office Action mailed July 5, 2005. Claims 1-50 are pending in this case. Reconsideration of the present case is earnestly requested in light of the following remarks.

Double Patenting Rejections

Claims 1-50 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-59 of U.S. Patent No. 6,219,628 B1 to Kodosky et al. ("Kodosky"), in view of US Patent 5,005,119 to Rumbaugh et al. ("Rumbaugh").

Upon reviewing the pertinent art, Applicant respectfully submits that the instant claims are patentably distinct and non-obvious over Kodosky in view of Rumbaugh.

As an example, the Examiner suggests that the instant claims map to method claims 1-21 in Kodosky. Applicant respectfully disagrees. Kodosky discloses "A computer-implemented method for configuring an instrument to perform a measurement function, wherein the instrument includes a programmable hardware element". Additionally, examination of Rumbaugh reveals the capability for "'user selection' of icons on the display for use in a program". However, nowhere does Kodosky or Rumbaugh teach a reconfigurable system with one or more fixed hardware resources coupled to the programmable hardware element. More specifically, the references fail to teach "displaying a graphical user interface on a display which is useable for configuring the reconfigurable system, wherein the graphical user interface displays *fixed hardware resource icons corresponding to each of at least a subset of the one or more fixed hardware resources*" and "deploying the hardware configuration program on the programmable hardware element, wherein the *hardware configuration program specifies use of one or more of the fixed hardware resources*".

Thus, Applicant submits that for at least these reasons claims 1-50 are patentably distinct and non-obvious over Kodosky in view of Rumbaugh, and are thus allowable.

Applicant respectively requests removal of the judicially created doctrine of obviousness-type double patenting rejection of claims 1-50.

Section 103 Rejections

Claims 1, 3-21, 23-41, and 43-50 were rejected under 35 U.S.C. 103(a) as being unpatentable over WO 94/15311 to Duncan ("Duncan"), in view of "A Software Development System for FPGA-Based Data Acquisition Systems" by Alan Wenban and Geoffrey Brown ("Wenban").

Claim 1 recties:

1. A method for configuring a reconfigurable system, wherein the reconfigurable system comprises a programmable hardware element and one or more fixed hardware resources coupled to the programmable hardware element, the method comprising:

displaying a graphical user interface on a display which is useable for configuring the reconfigurable system, wherein the graphical user interface displays fixed hardware resource icons corresponding to each of at least a subset of the one or more fixed hardware resources;

receiving user input to the graphical user interface specifying a function;

generating a hardware configuration program based on the user input, wherein the hardware configuration program is deployable on the reconfigurable system; and

deploying the hardware configuration program on the programmable hardware element, wherein the hardware configuration program specifies use of one or more of the fixed hardware resources;

wherein, after said deploying, the reconfigurable system is operable to perform the function.

The Examiner asserts that Duncan and Wenban teach all of the features and limitations of claim 1. Applicant respectfully disagrees. For example, the Examiner asserts that the cited art describes a "reconfigurable system that comprises a programmable hardware element and one or more fixed hardware resources coupled to the programmable hardware element", citing Duncan page 1, lines 6-8 and page 11, line

36-page 12, line 1. Applicant submits that Duncan nowhere discloses a reconfigurable system comprising a programmable hardware element and *one or more fixed hardware resources coupled to the programmable hardware element.* In fact, Duncan fails to mention or even hint at fixed hardware resources at all.

The Examiner further asserts that Duncan discloses "displaying a graphical user interface on a display which is useable for configuring the reconfigurable system, wherein the graphical user interface displays fixed hardware resource icons corresponding to each of at least a subset of the one or more fixed hardware resources", citing Duncan page 12, lines 20-23 and page 56, lines 6-7. Applicant submits that the cited text actually discloses the use of a library of icons representing simple designs for deployment to an FPGA. Nowhere does Duncan disclose a graphical user interface that displays *fixed hardware resource icons corresponding to each of at least a subset of the one or more fixed hardware resources.*

The Examiner admits that Duncan fails to teach "deploying the hardware configuration program on the programmable hardware element, wherein the hardware configuration program specifies use of one or more of the fixed hardware resources", but asserts that Wenban remedies this citing page 36, #2 and #3. Applicant submits that the cited text actually describes a method by which an FPGA could be reconfigured using a boot-strap loading of the reconfiguration data stored within on-board SRAM. Neither Wenban nor Duncan discloses any method for deploying the hardware configuration program on the programmable hardware element, wherein the hardware configuration program *specifies use of one or more of the fixed hardware resources.*

Furthermore, Applicant respectfully submits that neither Duncan nor Wenban provides a motivation to combine, and that the Examiner's suggested motivation to combine: "to provide more explicit details regarding the deployment of programmable code onto a hardware resource" is not a proper motivation and notes that Wenban's "more specific example" of deploying programmable code onto a hardware resource does not disclose aspects of the present invention related to fixed hardware resources, as recited in claim 1. Neither Wenban nor Duncan mentions these claimed features, and further, neither reference indicates or even hints at the desirability of these features.

Thus, Applicant respectfully submits that the attempted combination of these references is improper. Moreover, even were Duncan and Wenban properly combinable, which Applicant argues they are not, the resulting combination would still not produce Applicant's invention as represented in claim 1, as argued at length above.

Thus, for at least the reasons provided above, Applicant respectfully submits that Duncan and Wenban, taken singly or in combination, fail to teach all the features and limitations of claim 1, and so Applicant submits that claim 1 and those claims dependent therefrom are patentably distinct and non-obvious over the cited art, and are thus allowable.

Claims 11, 13, 21, 31, 33, and 41 include similar limitations as claim 1, and so the above arguments apply with equal force to these claims. Thus, for at least the reasons provided above, Applicant submits that claims 11, 13, 21, 31, 33, and 41, and those claims respectively dependent therefrom, are patentably distinct and non-obvious, and are thus allowable.

Applicant respectfully requests removal of the section 103 rejection of claims 1, 3-21, 23-41, and 43-50.

Applicant also asserts that numerous ones of the dependent claims recite further distinctions over the cited art. However, since the independent claims have been shown to be patentably distinct, a further discussion of the dependent claims is not necessary at this time.

CONCLUSION

Applicant submits the application is in condition for allowance, and an early notice to that effect is requested.

If any extensions of time (under 37 C.F.R. § 1.136) are necessary to prevent the above referenced application(s) from becoming abandoned, Applicant(s) hereby petition for such extensions. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert & Goetzel PC Deposit Account No. 50-1505/5150-63500/JCH.

Also enclosed herewith are the following items:

☒ Return Receipt Postcard

Respectfully submitted,

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